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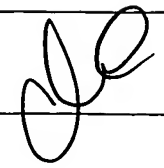
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,210	11/13/2003	Soren Edstrom	60680-754	8285
26127	7590	06/16/2004	EXAMINER	
DYKEMA GOSSETT PLLC 39577 WOODWARD AVENUE SUITE 300 BLOOMFIELD HILLS, MI 48304-5086			TRIEU, THERESA	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/712,210	Applicant(s) EDSTROM ET AL. 	
	Examiner Theresa Trieu	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10,12 is/are rejected.
- 7) ☒ Claim(s) 11 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>Feb. 27, 2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6, 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-4, 6, 7 and 12, the use of alternative expression “**or**” renders the claims indefinite because the alternative choices are non-equivalent.

Regarding claims 1-4, 6, 7 and 12, the recitation “the or a groove”, “the or the at least one land”, “the or an adjacent groove”, “ the or each idler screw” are confused, because it’s unclear which groove, land, adjacent groove, and idler screw are to be referenced to. Claim 4 is rejected also because they are dependent on the independent claim 3.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document. The claims appear to be a list of the elements of the invention without a clear explanation of each element’s placement. Applicant is advised to completely review the claims for errors.

Claim Rejections - 35 USC §102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Liou (Patent Number 6,019,586).

Regarding claims 1, 2 and 8, as shown in Figs. 1, 2 and 5, Liou discloses a pump including a power screw (2, 2') and at least one idler screw (2, 2') which meshes with the power screw, the power screw and idler screw being rotatable in a housing (1), the idler screw (2) having at least one screw form including a generally helical groove (22, 22') and a generally helical land surface (211), the land surface having a first and a second edge portion (not numbered; however, clearly seen in Fig. 5), each of which is adjacent to the groove, the distance between the land surface (211) and a longitudinal axis of the idler screw (30, 30') varying between the first edge portion and the second edge portion, the distance between the first/second edge portion and the longitudinal axis of the idler screw being substantially constant over the length of the screw form; the distance between the land surface (211) and a longitudinal axis increasing continuously from the first edge portion to the second edge portion.

Regarding claims 5-7, 9 and 12, Liou further discloses the idler screw (2, 2') is arranged so that the first edge portion leads the second edge portion as the idler screw rotates in use; the first/second edge portions (not numbered; however, clearly seen in Fig. 5) including a radiused lead-in to an adjacent groove (22, 22'); the power screw (2, 2') including at least one generally

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helical ridge (21, 21') which engages with the generally helical groove (22, 22') of the idler screw (2, 2'); the idler screw (2, 2') including two generally helical grooves (22, 22') of substantially the same pitch; the power screw (2, 2') including two generally helical ridges (21, 21') of substantially the same pitch; an end of the idler screw (2, 2') being mounted in a bearing (B) provided in the housing (see Fig. 2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liou (Patent Number 6,019,586).

Liou discloses the invention as recited above; however, Liou fails to disclose two idler screws located at diametrically opposite sides of the power screw. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized two idler screws, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co., Inc.*, 193 USPQ 8 (7th Cir. 1977).

Allowable Subject Matter

4. Claims 3 and 4 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

5. Claim 11 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Prior Art

The IDS (PTO-1449) filed on February 27, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists three patents.

Whitfield (Patent Number 3,289,600) discloses a helically threaded rotors for screw type pumps and compressions.

Becher (Patent Number 6,139,297) discloses a double worm system.

Becher (Patent Number 6,158,996) discloses screw rotor set.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 703-308-6434. The examiner can normally be reached on Monday-Thursday 7:30am- 6:00pm - Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E Denion can be reached on 703-308-2623. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT



Theresa Trieu

Patent Examiner

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